

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 24

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RICHARD H. YOUNG SR., AMAR N. NEOGI
AND MICHAEL R. HANSEN

Appeal No. 1996-3683
Application 08/207,393¹

ON BRIEF

Before METZ, JOHN DOUGLAS SMITH and OWENS, Administrative Patent Judges.

METZ, Administrative Patent Judge.

DECISION ON APPEAL

¹ Application for patent filed March 7, 1994. According to the official records of the United States Patent and Trademark Office, said application is a continuation of Serial Number 07/890,040, filed on May 27, 1992, and now abandoned, which is a continuation of Serial Number 07/326,188, filed March 20, 1989, and now U.S. Patent Number 5,230,959, issued on July 27, 1993.

Appeal NO. 1996-3683
Application 08/207,393

This is an appeal from the examiner's refusal to allow claims 19 through 40, which are all the claims pending in the instant application. Claim 22, which depends from a finally rejected claim, is not separately rejected but has not been allowed.

THE INVENTION

The appealed subject matter is directed to a fiber product made from discontinuous fibers having solid particles of super absorbent material adhered to the discontinuous fibers. The super absorbent material adhere to a binder coating on at least a portion of the fibers. The binders contain at least three percent free carboxyl groups. According to appellants, binders having free carboxyl groups and used to coat the fibers produce especially strong adhesion of the super absorbent particles and the fibers (page 9, lines 15 through 18 of the specification).

Claim 21 is believed to be adequately representative of the appealed subject matter and is reproduced below for a more facile understanding of the claimed subject matter.

Claim 21. A fiber product which comprises discontinuous fibers, a binder which coats at least a portion of the fibers, the binder containing greater than three percent free carboxyl groups, solid particles of super absorbent material adhered to the fibers by the free carboxyl group containing

Appeal NO. 1996-3683
Application 08/207,393

binder, the binder being about seven percent or greater of the combined dry weight of the binder, particles, and fibers to which the super absorbent material particles are adhered by the binder, and wherein the particles are not entirely coated with the binder.

Appeal NO. 1996-3683
Application 08/207,393

THE REJECTIONS

Claims 19 through 21 and 23 through 40 stand rejected under 35 U.S.C. § 112, first paragraph, on the grounds that the subject matter claimed therein is not enabled by appellants' specification. We reverse.

OPINION

After a thorough review of the claims before us considered in light of appellants' disclosure, the prior art of record in the prosecution history and the respective positions of both the appellants and the examiner, we conclude that considerable speculation as to the meaning of the claim terminology "free carboxyl groups" and the scope of the claims was engaged in by both the appellants and the examiner. Accordingly, we take the unusual step of summarily reversing the examiner's rejection and entering the following new ground of rejection, because the rejection was improperly founded on speculation and assumptions by both the appellants and the examiner. Compare In re Steele, 305 F.2d 859, 134 USPQ 292 (CCPA 1962).

NEW GROUND OF REJECTION

Pursuant to our authority under 37 C.F.R. § 1.196(b), we enter the following new ground of rejection.

Claims 19 through 40 are rejected under 35 U.S.C. § 112, second paragraph, because it cannot be determined what is meant by the claim language "free carboxyl groups."

In In re Moore, 439 F.2d 1232, 169 USPQ 236 (CCPA 1971), one of the predecessors to our reviewing court enunciated the test for determining whether or not an application for patent complied with the requirements of 35 U.S.C. § 112, first paragraph. As the court noted, 439 F.2d at 1235, 169 USPQ at 238:

Any analysis in this regard should begin with the determination of whether the claims satisfy the requirements of the second paragraph. It may appear awkward at first to consider the two paragraphs in inverse order but it should be realized that when the first paragraph speaks of "the invention", it can only be referring to that invention which the applicant wishes to have protected by the patent grant, i.e., the *claimed* invention. For this reason, the claims must be analyzed first in order to determine exactly what subject matter they encompass. The subject matter there set out must be presumed, in the absence of evidence to the contrary, to be that "which the applicant regards as his invention."

Accordingly, before the examiner addressed the question of whether or not appellants' disclosure was enabling for the claimed subject matter, the examiner should have first ascertained the metes and bounds of the claim term "free carboxyl groups" as it is defined by appellants in their

Appeal NO. 1996-3683
Application 08/207,393

disclosure.

On page 9, lines 15 through 18 of their specification, appellants disclose that:

it has also been discovered that binders of the type with free carboxyl groups produce especially strong adhesion of the super absorbent particles and fibers.

At page 13, lines 22 through 24, appellants disclose that useful binders "include substances which can be applied in liquid form to entrained fibers during the treatment process." Appellants thereafter disclose that "suitable binders " include polymeric materials in the form of emulsions or solutions (page 13, line 36 through page 14, line 2 of the specification). Exemplary suitable thermoplastic binders are set forth on page 14, line 30 through page 15, line 13 of the specification. Exemplary thermoset binders are set forth at page 15, lines 16 through 24 of the specification. Surfactants may also be included in the liquid binder (page 16, lines 11 and 12 of the specification). In Figure 1, a mechanism is provided at the binder application zone **30** for applying a liquid binder solution to the entrained fibers (page 19, lines 25 through 27). Preferably, the binders are "of a polymeric heat bondable type" (page 33, lines 20 and 21 of the specification).

In Example 1, cellulose fibers are sprayed with "PRIMACOR

4990" ethylene acrylic acid copolymer solution, described as a 20 percent solids solution, and including 1.74 percent of a surfactant (OT-S Dioctyl Sodium Sulfosuccinate) (page 30, line 32 through page 31, line 15). Other proprietary products tested as the binder are described as SYNTHEMUL 40-800 and 40-850 (page 32, lines 30 through 32). Example 10 is presented to show that the super absorbent particles adhere better to the fibers when the binder has "free carboxyl groups." The example is said to prepare fibers manufactured" as explained above in connection with example 1." (see page 39, lines 25 through 36 of the specification). The example compares the strength of adhesion of super absorbent particles with PRIMACOR and with SYNTHEMUL 40-504 binders. The PRIMACOR binder is stated to have "20 percent carboxylation" while the SYNTHEMUL 40-504 is stated to have from "1 to 3 percent carboxylation." When passed through a hammermill, fewer particles separated from the fibers treated with the higher carboxyl group containing binder (page 40, lines 1 through 12). No original claim (claims 1 through 18) includes any limitation with respect to the amount of "free carboxyl

groups" present in the binder.²

At the time appellants filed their application, any organic chemist of ordinary skill in the art would have understood the term "carboxyl group" to be the carboxylic acid radical **-COOH**. Thus, it is not entirely clear to what the term "free" refers in the phrase "free carboxyl groups" since, by definition, a carboxyl group is "free" because it is not bound to any other moiety as in, for example, an ester, amide or a salt. Thus, appellants' disclosure at page 9 of their specification would seem to be directed to carboxylic acid-containing compounds useful as binders.

Considered with the disclosure at pages 13 and 14, it appears that the binders are either themselves liquid compounds which may be applied to the fibers neat or the binders may be "applied in liquid form" to the fibers as emulsions or solutions. As we understand the term "free

² Original claims constitute part of the original disclosure of a patent application. See In re Gardner, 475 F.2d 1389, 1391, 177 USPQ 396, 397 (CCPA 1973); In re Anderson, 471 F.2d 1237, 1238, 1239, 176 USPQ 331, 332 (CCPA 1973); In re Myers, 410 F.2d 420, 427, 161 USPQ 668, 673 (CCPA 1969).

carboxyl groups", the only binders from the list of "suitable binders" at pages 14 and 15 of the specification which include "free carboxyl groups" are "acrylic" (assuming this means acrylic acid) and ethylene acrylic acid (EAA). However, whether this interpretation is sound is questionable in light of the examiner's unchallenged argument that urethanes, described by appellants as suitable thermoplastic binders on page 15 of their specification, include "free carboxyl groups" (see page 7 of the Supplemental Answer). A urethane is an ester-amide (NH_2COOR) and, as we understand the term, does not include any "free" carboxylic acid moieties. Thus, further uncertainty as to exactly what appellants' claims embrace or exclude is raised by appellants' failure to respond to the examiner's argument.

Appellants' only specifically exemplified binders in the examples are proprietary products bearing the names PRIMACOR and, generally, SYNTHMUL. While appellants have not favored the record with the product information sheets from the manufacturers of said proprietary products, at least PRIMACOR 4990 is described as an "ethylene acrylic acid copolymer solution" having a 20 percent solids content although neither the molecular weight nor the nature of the EAA adduct is set

Appeal NO. 1996-3683
Application 08/207,393

forth (page 31 of the specification). But is the "percent carboxylation" the same as "free carboxyl groups"? Is the percent carboxylation determined based on the weight of the entire solution used or the solid ethylene acrylic acid copolymer dissolved in the solution or dispersed in the emulsion *per se*? While in Example 10 SYNTHEMUL 40-504 is stated to have from 1 to 3 percent "carboxylation", the chemical composition or nature of SYNTHEMUL is not set forth in the specification. Whether "carboxylation" and "free carboxyl"

content are the same is not clear from the example. Suffice it to say that the claims use the terminology "free carboxyl groups" not percent carboxylation.

From all the above we are unable to ascertain to what the term "free carboxyl group" in the claims refers. Because the binders actually employed by the appellants appear to be solutions or emulsions, it cannot be determined if the binders which contain "free carboxyl groups" recited in the claims are intended to embrace the "free carboxyl group" content based on the weight of the proprietary solutions or emulsions or if the binders having the "free carboxyl group" content claimed are intended to be directed to the "free carboxyl group" content of the actual chemical compounds which are ultimately dissolved in solution or dispersed in an emulsion. Indeed ethylene acrylic acid (a one-to-one adduct of ethylene and acrylic acid) is about 45 percent by weight carboxylic acid ("free carboxyl group").

OTHER ISSUES

The written description requirement of 35 U.S.C. § 112, first paragraph, is separate from the enablement requirement found in the same provision of 35 U.S.C. § 112. In re Wilder, 736 F.2d 1516, 1520, 222 USPQ 369, 372 (Fed. Cir. 1984). In

rejecting the claims under 35 U.S.C. § 112, first paragraph, it is the examiner's burden to establish lack of enablement by compelling reasoning or objective evidence. In re Strahilevitz, 668 F.2d 1229, 212 USPQ 561 (CCPA 1982); In re Armbruster, 512 F.2d 676, 185 USPQ 152 (CCPA 1975).

We recognize that the enablement requirement of the first paragraph of 35 U.S.C. § 112 requires that there be some reasonable correlation between the scope of the claims and the scope of enablement described in the specification.

In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970). However, it has been consistently held that the first paragraph of 35 U.S.C. § 112 requires nothing more than objective enablement. In re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

In meeting the enablement requirement, an application need not teach, and preferably omits, that which is well-known in the art. Hybritech Inc. v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 1384, 231 USPQ 81, 94 (CCPA 1986), cert. denied, 480 U.S. 947 (1987). How such a teaching is set forth, whether by the use of illustrative examples or by broad descriptive terminology, is of no importance since a specification which teaches how to make and use the invention

Appeal NO. 1996-3683
Application 08/207,393

in terms which correspond in scope to the claims must be taken as complying with the first paragraph of 35 U.S.C. § 112 unless there is reason to doubt the objective truth

of the statements relied upon therein for enabling support. Marzocchi, 439 F.2d at 223, 169 USPQ at 369.

On the other hand, the question to be resolved concerning the "written description" requirement of 35 U.S.C. § 112, first paragraph, is whether or not appellants' original disclosure reasonably conveyed that they were possessed of, as of their filing date, the invention later claimed by them. The primary inquiry into satisfaction of the written description requirement is factual and depends on the nature of the invention and the amount of knowledge imparted to those skilled in the art by the disclosure. In re Wertheim, 541 F.2d 257, 262, 191 USPQ 90, 96 (CCPA 1976).

In considering this issue the examiner should consider whether or not appellants' original disclosure has "blaze marks" on specific trees that mark a trail through the forest of appellants' disclosure. See In re Ruschig, 379 F.2d 990, 994-95, 154 USPQ 118, 122 (CCPA 1967). Absent such "blaze marks", a general disclosure ordinarily will not support

Appeal NO. 1996-3683
Application 08/207,393

(describe) later claimed narrower subject matter. Fujikawa v. Wattanasin, 93 F.3d 1559, 1571, 39 USPQ2d 1895, 1905 (Fed. Cir. 1996). The direction leading one to the later claimed narrower subject matter must be expressed in "full, clear, concise and exact" language. See Fields v. Connover, 443 F.2d 1386, 1391, 170 USPQ 276, 280 (CCPA 1971); In re Albrecht, 435 F.2d 908, 911, 168 USPQ 293, 296 (CCPA 1971); Ruschig; 379 F.2d at 996, 154 USPQ at 123.

Accordingly, upon return of this application to the examining group and after resolving what is meant by "free carboxyl group" as raised in the rejection under 35 U.S.C. § 112, second paragraph, the examiner should consider whether or not appellants' now claimed subject matter is "described" by their original disclosure. The examiner should consider whether appellants' broad disclosure of compounds which contain "free carboxyl groups" generally as useful binders coupled with appellants' disclosure of two suitable "free carboxyl group" containing thermoplastic binders and the exemplification of two proprietary products of unknown chemical composition reasonably conveyed to a person of ordinary skill in the art that appellants were possessed, as of their filing date, March 20, 1989, of the subject matter

Appeal NO. 1996-3683
Application 08/207,393

now claimed by them ("binder containing at least three percent free carboxyl groups"; "binder containing greater than three percent free carboxyl groups"; "binder contains twenty percent free carboxyl groups"; "binder containing free carboxyl groups in an amount which is greater than or equal to three percent of the binder"; and "binder has at least twenty percent free carboxyl groups").

SUMMARY

The rejection of the claims under 35 U.S.C. § 112, first paragraph, is **reversed**. We have made a new ground of rejection under 37 C.F.R. § 1.196(b).

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 1.196(b)(amended effective Dec. 1, 1997, by final rule notice, 62 Fed. Reg. 53,131, 53,197 (Oct. 10, 1997), 1203 Off. Gaz. Pat. & Trademark Office 63, 122 (Oct. 21, 1997)).

37 C.F.R. § 1.196(b) provides that, "A new ground of rejection shall not be considered final for purposes of judicial review."

37 C.F.R. § 1.196(b) also provides that the appellants, WITHIN TWO MONTHS FROM THE DATE OF THE DECISION, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of proceedings (§ 1.197(c)) as to the rejected claims:

(1) Submit an appropriate amendment of the claims so rejected or a showing of facts relating to the claims so rejected, or both, and have the matter reconsidered by the examiner, in which event the application will be remanded to the examiner. . . .

(2) Request that the application be reheard under § 1.197(b) by the Board of Patent Appeals and Interferences upon the same record. . . .

Appeal NO. 1996-3683
Application 08/207,393

No time period for taking any subsequent action in
connection with this appeal may be extended under 37 C.F.R.
§ 1.136(a).

REVERSED
37 C.F.R 1.196(b)

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| ANDREW H. METZ |) | |
| Administrative Patent Judge |) | |
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| |) | BOARD OF PATENT |
| JOHN D. SMITH |) | APPEALS |
| Administrative Patent Judge |) | AND |
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Appeal NO. 1996-3683
Application 08/207,393

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